

AMENDMENTS TO THE CLAIMS

The following listing of claims will replace all prior versions and listings of claims in the application.

LISTING OF CLAIMS

1. (original) A boron aluminosilicate glass comprising at least the following components (in wt.-%):

SiO ₂	40 to 47
B ₂ O ₃	0.1 to 6
Al ₂ O ₃	0.1 to 4
P ₂ O ₅	0. to 4
Li ₂ O	0 to 2
Na ₂ O	2 to 7
K ₂ O	>6.5 to 11
MgO	0 to 5
CaO	0. to 6
BaO	6 to 14
ZnO	20 to 25
La ₂ O ₃	0 to 1.5
ZrO ₂	1 to 7.

2. (original) The boron aluminosilicate glass of claim 1 comprising in wt.-%):

SiO ₂	42 to 47
B ₂ O ₃	0.1 to 5
Al ₂ O ₃	0.1 to 2
P ₂ O ₅	0.5 to 3
Na ₂ O	3 to 6
K ₂ O	>6.5 to 10
CaO	1 to 5
BaO	6 to 12
ZnO	20 to 25
ZrO ₂	3 to 7,

up to 1 wt.-% of refining agents.

3. (original) A boron aluminosilicate glass comprising at least the following components (in wt.-%):

SiO ₂	38 to 45
B ₂ O ₃	0.1 to 6
Al ₂ O ₃	0.1 to 4
P ₂ O ₅	0.1 to 4
Li ₂ O	>2 to 6
Na ₂ O	2 to 7
K ₂ O	2 to 6.5
MgO	0 to 5
CaO	0.5 to 6.5
BaO	6 to 14.5
ZnO	14 to <20
La ₂ O ₃	>1.5 to 5
ZrO ₂	1 to 7.

4. (original) The boron aluminosilicate glass of claim 3, comprising the following components (in wt.-%):

SiO ₂	38 to 43
B ₂ O ₃	0.1 to 5
Al ₂ O ₃	0.5 to 3
P ₂ O ₅	0.5 to 3
Li ₂ O	>2 to 6
Na ₂ O	3 to 6
K ₂ O	3 to 6.5
CaO	2 to 6.5
BaO	8 to 14.5
ZnO	14 to 19
La ₂ O ₃	>1.5 to 3
ZrO ₂	2 to 5,

up to 1 wt.-% of refining agents.

5. (original) A boron aluminosilicate glass comprising (in wt.-%):

SiO ₂	35 to 50
B ₂ O ₃	0.1 to 7
Al ₂ O ₃	0.1 to 7
P ₂ O ₅	0.1 to 4
R ₂ O	4 to 24
RO	0 to 12
BaO	6 to 14.5
ZnO	14 to 25
La ₂ O ₃	0 to 5
ZrO ₂	0 to 10,

wherein R₂O is an alkali oxide, RO is an alkaline earth oxide apart from BaO, wherein the amount of Li₂O is 6 wt.-% maximum and wherein the glass, apart from any unintended contaminants, does not contain any GeO₂, SnO, SnO₂, Sb₂O₃, AgO or any rare earth metals.

6. (original) The boron aluminosilicate glass of claim 5 which comprises up to 1 wt.-% of refining agents.

7. (original) The boron aluminosilicate glass of claim 6, wherein said refining agents comprise at least one component selected from the group formed by Sb₂O₃, As₂O₃, SnO, NaCl, SO₄²⁻ and F⁻.

8. (original) The boron aluminosilicate glass of claim 5 comprising (in wt.-%):

SiO ₂	35 to 50
B ₂ O ₃	0.1 to 7
Al ₂ O ₃	0.1 to 7
P ₂ O ₅	0.1 to 4
Li ₂ O	0 to 6
Na ₂ O	2 to 7
K ₂ O	2 to 11
MgO	0 to 5
CaO	0.5 to 6.5
BaO	6 to 14.5
ZnO	14 to 25
La ₂ O ₃	0 to 5
ZrO ₂	1 to 10

refining agents in common amounts.

9. (original) The boron aluminosilicate glass of claim 7, wherein the portion of RO in the total weight is smaller than the portion of BaO.

10. (original) The boron aluminosilicate glass of any claim 5, comprising at least the following components (in wt.-%):

SiO ₂	38 to 47
B ₂ O ₃	0.1 to 6
Al ₂ O ₃	0.1 to 4
P ₂ O ₅	0.1 to 4
Li ₂ O	0 to 6
Na ₂ O	2 to 7
K ₂ O	2 to 11
MgO	0 to 5
CaO	0.5 to 6.5
BaO	6 to 14.5
ZnO	14 to 25
La ₂ O ₃	0 to 5
ZrO ₂	1 to 7.

11. (original) The boron aluminosilicate glass of claim 5 having a refractive index n_d of $1.54 = n_d = 1.62$.

12. (original) The boron aluminosilicate glass of claim 5 having an Abbe number of $48 = v_d = 57$.

13. (withdrawn) An optical stepped-index fiber comprising a core glass according to claim 5, and further comprising a cladding glass fully enclosing an outer surface of said core glass and having a numerical aperture of 0.28 to 0.70.

14. (withdrawn) The optical stepped-index fiber of claim 13, wherein said cladding glass comprises (in wt.-%):

SiO ₂	60 to 72
B ₂ O ₃	< 20
Na ₂ O	< 18
K ₂ O	< 15
Li ₂ O	< 2
MgO	< 3
BaO	< 3
SrO	< 4
CaO	< 6
ZnO	< 3
F ⁻	< 1

other oxides 0 to 3,
up to 1 wt.-% of refining agents.

15. (withdrawn) The optical stepped-index fiber of claim 13, wherein said cladding glass comprises (in wt.-%):

SiO ₂	60 to 72
B ₂ O ₃	< 20
Na ₂ O	< 18
K ₂ O	< 15
Li ₂ O	< 2
MgO	< 3
BaO	< 3
SrO	< 4
CaO	< 6
ZnO	< 3
F ⁻	< 1.

16. (withdrawn) The optical stepped-index fiber of claim 13, wherein said cladding glass, apart from any unintended contaminants, does not contain any Cs₂O.

17. (withdrawn) The optical stepped-index fiber of any of claim 13, wherein in said cladding glass the sum of the components Na₂O, Li₂O and K₂O is smaller than 3 wt.-%.

18. (withdrawn) The optical stepped-index fiber of any of claims 17 wherein in said cladding glass the content of SiO₂ is between 66 and 72 wt.-%.

19. (new) A boron aluminosilicate glass comprising (in wt.-%):

SiO ₂	35 to 50
B ₂ O ₃	0.1 to 7
Al ₂ O ₃	0.1 to 7
P ₂ O ₅	0.1 to 4
R ₂ O	4 to 24
RO	0 to 12
BaO	6 to 14.5
ZnO	14 to 25
La ₂ O ₃	0 to 5
ZrO ₂	1 to 10,

wherein R₂O is an alkali oxide, RO is an alkaline earth oxide apart from BaO, wherein the amount of Li₂O is 6 wt.-% maximum.